

**ABSTRACT OF THE DISCLOSURE**

A method for detecting a DNA having the mitochondrial DNA 3243 mutation is disclosed. Quantitative PCR is used with a primer having a nucleotide sequence complementary to the nucleotide sequence starting from the nucleotide number 243 in SEQ ID NO: 2 and having a length of 12 to 30 nucleotides. A method is also disclosed for detecting a DNA having the mitochondrial DNA 3243 mutation by using a nucleic acid probe which is end labeled with a fluorescent dye. The fluorescence of the fluorescent dye decreases upon hybridization. The nucleic acid probe has a nucleotide sequence complementary to the nucleotide sequence starting from nucleotide number 230 in the nucleotide sequence of SEQ ID NO: 2 and a length of 14 to 40 nucleotides. The 3' end of the probe is labeled with the fluorescent dye.